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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR   | ATTORNEY DOCKET NO.       | CONFIRMATION NO. |
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| 10/003,821      | 10/31/2001  | Scott Patrick Campbell | 08305/110001/PBIT-0141.00 | 4707             |

7590 11/29/2004

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EXAMINER

ZARNEKE, DAVID A

ART UNIT PAPER NUMBER

2829

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/003,821

Applicant(s)

CAMPBELL, SCOTT PATRICK

Examiner

David A. Zarneke

Art Unit

2829

*RW*

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) 8, 11, 12 and 18-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 10, 13-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 9/15/04 with respect to the rejection of claims have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made, which is detailed below.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-5, 9 and 10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Shichi et al., JP 406151977A (figure 1).

Regarding claim 3, Shichi teaches the use of an image sensor (25), and a central portion of said frame defines a portion where image light can enter said image sensor.

With respect to claims 4 and 5, Shichi teaches an element [transparent resin (26)] which allows sealing said IC relative to an environment of said package.

As to claim 9, Shichi teaches an element [moisture proofing resin (27)] which protects said sealing element against damage.

In re claim 10, Shichi teaches the element which protects includes an extending part which extends above a top of said sealing element.

Claims 13-15 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Shichi et al., JP 406151977A (figure 1).

Regarding claims 14 and 15, Shichi teaches an element [transparent resin (26)] which allows sealing said IC relative to an environment of said package.

With respect to claim 17, Shichi teaches a backing area (27), hermetically sealing a bottom portion and wherein said metal contact (23a&b and 24a&b) is disposed around said bottom portion (figure 1).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shichi et al., JP 406151977A, as applied to claim 1 above.

Shichi, which teaches the package includes a wire bond connection portion, fails to teach the connection portion is a solder connection, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a solder connection in place of a wire bond connection because a solder connection is an equivalent connection method to wire bonds and forms a more compact package that is a much stronger and more reliable connection than a wire bond.

The substitution of one known equivalent technique for another may be obvious even if the prior art does not expressly suggest the substitution (Ex parte Novak 16 USPQ 2d 2041 (BPAI 1989); In re Mostovych 144 USPQ 38 (CCPA 1964); In re Leshin 125 USPQ 416 (CCPA 1960); Graver Tank & Manufacturing Co. V. Linde Air Products Co. 85 USPQ 328 (USSC 1950).

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shichi et al., JP 406151977A, as applied to claim 1 above, and further in view of Sasano, US Patent 6,313,525.

Shichi fails to teach the use of a glass lid as the clear sealing element (claims 6 & 7) and teaches a backing portion (the die-bond that holds the die to the frame) on a rear portion of the die (claim 7).

Sasano (figure 1) teaches a glass lid (9) on top of a package (6, 64+).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the glass lid of Sasano in the invention of Shichi because Sasano

teaches an equivalent method of sealing an IC in a package and the glass lid is not easily cracked by thermal stress, enabling air-tightness to be maintained (7, 30+).

The substitution of one known equivalent technique for another may be obvious even if the prior art does not expressly suggest the substitution (Ex parte Novak 16 USPQ 2d 2041 (BPAI 1989); In re Mostovych 144 USPQ 38 (CCPA 1964); In re Leshin 125 USPQ 416 (CCPA 1960); Graver Tank & Manufacturing Co. V. Linde Air Products Co. 85 USPQ 328 (USSC 1950).

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shichi et al., JP 406151977A, as applied to claim 1 above, and further in view of Sasano, US Patent 6,313,525.

Regarding claim 16, Shichi fails to teach element which seals is formed of glass and is hermetically sealed around an area of said inner periphery.

Sasano (figure 1) teaches a glass lid (9) hermetically sealed (6, 6+) around an area of said inner perimeter.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the glass lid of Sasano in the invention of Shichi because Sasano teaches an equivalent method of sealing an IC in a package and the glass lid is not easily cracked by thermal stress, enabling air-tightness to be maintained (7, 30+).

The substitution of one known equivalent technique for another may be obvious even if the prior art does not expressly suggest the substitution (Ex parte Novak 16 USPQ 2d 2041 (BPAI 1989); In re Mostovych 144 USPQ 38 (CCPA 1964); In re Leshin

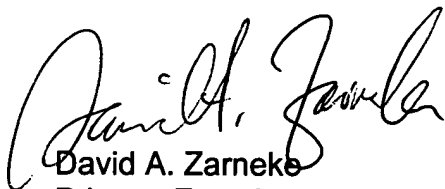
125 USPQ 416 (CCPA 1960); Graver Tank & Manufacturing Co. V. Linde Air Products Co. 85 USPQ 328 (USSC 1950).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hanamoto et al. US Patent 5,291,038, and But et al., US Patent 4,761,518, both teach inventions that read upon at least the independent claims.

Any inquiry concerning this communication from the examiner should be directed to David A. Zarneke at (571)-272-1937. The examiner can normally be reached on M-F 7:30 AM-6 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on (571)-272-1812. The fax phone number for the organization where this application is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David A. Zarneke  
Primary Examiner  
November 20, 2004